AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-50. (cancelled)

51. (currently amended) Apparatus for spacing two relatively rotatable facing surfaces in use by entraining gas between the surfaces, the apparatus including:

a first portion defining a generally frusto-conical surface;

a second portion defining at least one flat surface disposed adjacent the first portion so that the two surfaces face each other and define at least one point of closest engagement between the surfaces, with diverging gaps extending between the surfaces on either side of a plane which contains the at least one point of closest engagement ~~and which extends generally orthogonal to the direction of relative rotation~~, the gaps extending in a substantially circumferential direction relative to the two rotatable facing surfaces; and

a device for biasing the flat surface towards the frusto-conical surface to maintain the gaps with a predetermined dimensional range.

52. (previously presented) Apparatus as claimed in claim 51 wherein the frusto-conical surface is part of a right circular cone.

53. (previously presented) Apparatus as claimed in claim 51 wherein the surfaces engage at the point of closest engagement when the portions are not rotating relative to each other.

54. (previously presented) Apparatus as claimed in claim 51 wherein the second portion includes a carrier and at least one tile element mounted on the carrier to define the flat surface.

55. (previously presented) Apparatus as claimed in claim 54 wherein the or each tile element is pivotably mounted on the carrier.

56. (previously presented) Apparatus as claimed in claim 51, wherein the second portion defines a plurality of spaced substantially flat surfaces arranged circumjacent the frusto-conical surface to define respective points of closest engagement and associated gaps, the apparatus further including a plurality of said biasing devices, each said biasing device being associated with a respective said flat surface.

57. (previously presented) Apparatus as claimed in claim 51 wherein the surfaces are relatively positioned in a direction of relative rotation such that torques generated on the

flat surface by entrained gas are balanced about the point or points of closet engagement.

58. (previously presented) Apparatus as claimed in claim 51 including a mechanism for rotating the first and/or the second portion.

59. (previously presented) Apparatus as claimed in claim 51 wherein the first portion and/or the second portion is formed of or coated by a ceramic material.

60. (previously presented) Apparatus as claimed in claim 51 wherein the generally frusto-conical surface is concave or convex.

61. (previously presented) Apparatus as claimed in claim 51 wherein the biasing device includes a wave spring, a thrust bearing and/or a set of coil springs.

62. (previously presented) Apparatus as claimed claim 51, further including a third portion defining at least one flat surface disposed adjacent a further frusto-conical surface on the first portion and substantially opposite the second portion such that forces generated by the second and third portions are substantially equal and opposite.

63. (previously presented) Apparatus as claimed in claim 51, further including a thrust connection for transmitting thrust, but not rotation.

64. (previously presented) Apparatus as claimed in claim 63, wherein the first portion is connected to or provides a

first sealing surface, and the second portion is connected to or provides a second sealing surface which forms a seal with the first sealing surface.

65. (previously presented) Apparatus as claimed in claim 64, wherein the second sealing surface is located within a housing having a ring, the second sealing surface being slidable on the ring so that it can be brought in and out of contact with the first sealing surface.

66. (currently amended) Apparatus as claimed in claim 65, wherein the biasing device is or includes an axial wave spring housed in ~~the~~ a recess.

67. (previously presented) Apparatus as claimed in claim 65, wherein the ring includes an upstand portion for retaining the components of the seal together in a pre-assembled condition.

68. (previously presented) Apparatus as claimed in claim 67, wherein the upstand portion forms an air dam.

69. (previously presented) Apparatus as claimed in claim 55, wherein the biasing device deflects the tile element into contact with the first portion when the first portion ceases to rotate.

70. (previously presented) Apparatus as claimed in claim 51, further including an axially moveable tile carrier defining a radial sealing surface for forming, with a further radial sealing surface, a radial seal to separate internal and

external pressure areas and an axially sealing surface cooperating with an axially slidable seal to separate internal and external pressure areas whereby a radial location of the seal is selected such that the pressure applied by the internal and external pressure areas to the radial sealing surface is substantially balanced by at least the internal and external pressures applied to respective pressure-balancing surfaces opposing the radial sealing surface.

71. (previously presented) Apparatus as claimed in claim 70, including a piston ring between the sealing surface and the seal, wherein the tile carrier is provided with a cylindrical sliding surface containing a groove into which is fitted a piston sealing ring, the sliding surface and the piston sealing ring cooperating with a cylindrical bore formed in a seal static back member such that the cylindrical bore together with the cylindrical surface and the tile carrier define a closed annular space, the apparatus further including a valve for venting the enclosed gas space.

72. (previously presented) Apparatus as claimed in claim 71, wherein venting of the enclosed gas space causes the tile carrier to withdraw from engagement with the further radial sealing surface.

73. (previously presented) Apparatus as claimed in claim 69, wherein including a rotating face seal that is at least partially formed of or coated with an abradable material so that

in the event of a tile failure the unbalanced forces drive cutting blades on the tile cattier into contact with the material so that it is abraded away, thereby preventing contact between the pressure-balancing surface and the radial sealing surface.

74. (previously presented) Apparatus as claimed in claim 69, including a tile carrier that is at least partially formed of or coated with an abradable material so that in the event of a tile failure the unbalanced forces drive cutting blades on the rotating face seal into the abdradable material, the material being abraded away, thereby preventing contact between pressure-balancing surface and the radial sealing surface.

75. (currently amended) An axially moveable tile carrier defining a radial sealing surface for forming, with a further radial sealing surface, a radial seal to separate internal and external pressure areas and an axially sealing surface cooperating with an axially slidable seal to separate the internal and external pressure areas whereby the radial location of the seal is selected such that the pressure applied by the internal and external pressure areas to the radial sealing surface is substantially balanced by at least the internal and external pressures applied to respective pressure-balancing surface opposing the radial sealing surface in use, the radial sealing surface and the further radial sealing surface being held apart at a gap.

76. (currently amended) Apparatus including two relatively rotating grooveless surfaces arranged such that, over a normal design rotation range, the two surfaces are held apart at a gap due to self-generated air or gas pressure existing between the surface which, by acting on discrete areas, produces a force aligned in an axial direction relative to the axis of the rotation, the force being balanced by a biasing device to maintain the gap, wherein one of the surfaces is generally frusto-conical and the other of the surfaces is flat, and wherein the two surfaces face each other and define at least one point of closest engagement between the surfaces, with diverging gaps extending between the surfaces on either side of a plane which contains the at least one point of closest engagement, ~~and which extends generally orthogonal to a direction of relative rotation~~ the gaps extending in a substantially circumferential direction relative to the two rotatable facing surfaces.